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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES F. CURRY, KOLAZI S. NARAYANAN,
RONALD H. GOEHNER, JR., DOMINOG I. JON
and GEORGE B. BEESTMAN

Appeal 2008-1654
Application 10/669,046
Technology Center 1700

Decided: March 7, 2008

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
PETER F. KRATZ, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

1 This is a decision on an appeal from the Examiner's final rejection of claims 1-3 and 15, the only claims that remain pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' claimed invention is directed to an aqueous dispersion consisting essentially of: (a) 0.1-40 weight percent of a water insoluble alkylated vinyl pyrrolidone copolymer having a particle size less than 10 microns, and (b) 0.001- 30 weight percent of a polymeric anionic emulsifier. Each of (a) and (b) are present in broadly specified weight percents and the pyrrolidone content of (a) is required to be greater than 10 weight percent. The compositions can be used in a variety of applications, such as seed coatings, UV protection formulations, adhesive binders, protective coatings, and personal care products (Specification 1). Claim 1 is illustrative and reproduced below:

1. An aqueous dispersion consisting essentially of (a) 0.1-40% by wt. of a water-insoluble alkylated vinyl pyrrolidone copolymer having a pyrrolidone content of >10%, in which the copolymer particles have a particle size <10 microns, and (b) 0.001-30% by wt. of a polymeric anionic emulsifier.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Carter	U.S. 2,835,654	May 20, 1958
Narayanan	U.S. 6,303,131	Oct. 16, 2001

Richard J. Lewis, Sr., *Hawley's Condensed Chemical Dictionary*, 13th Edition, *Lignin Sulfonate*, in p. 671 (1997).

Claims 1-3 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Narayanan¹ in view of Carter.

¹ Appellants do not contest the availability of the subject matter disclosed in Narayanan as being available as prior art to the here claimed subject matter, for use as prior art under 35 U.S.C. § 103(a).

We affirm the Examiner's obviousness rejection as to all of the rejected claims for substantially the reasons set forth in the Answer and as further discussed below.²

At the outset, we note that the rejected claims are argued together as a group in the Brief. Thus, we select claim 1 as the representative claim on which we shall focus in deciding this appeal.³

The Examiner has reasonably determined that Narayanan discloses a dispersion substantially corresponding to the dispersion called for in representative claim 1 (Ans. 4). In this regard, Narayanan discloses an aqueous micro-emulsion (dispersion) most preferably including 10-20 weight percent of water insoluble copolymer, such as the preferred N-vinyl-pyrrolidone(s). These disclosed pyrrolidones include alkylated vinyl pyrrolidone polymers, such as Agrimer AL30 (ISP Corporation) and other water- insoluble copolymers within the scope of the representative claim 1 requirement for such polymers (Narayanan, col. 1, ll. 41-53, col. 4, ll. 21-44, col. 6, l. 65- col. 7, l. 13). Compare Appellants' disclosed copolymers with the above-noted disclosure of Narayanan (Specification 3). Moreover,

² Our references to the Answer herein are to the Supplemental Examiner's Answer mailed July 23, 2007.

³ Appellants express "wishes to have each claim considered separately and not to stand or fall together" (Br. 2). Also, Appellants furnish brief comments about some alleged limitations recited by claims 2, 3, and 15 (Br. 6). However, Appellants have not furnished separate arguments directed to the separate patentability of each of the rejected claims as required. See 37 C.F.R. § 41.37(c)(1)(vii). More particularly, we note that a statement directed to only what a particular claim recites is not an argument for the separate patentability of that claim. *Id.* Thus, the brief comments about some alleged limitations recited by claims 2, 3, and 15 do not amount to arguments for the separate patentability of these commonly rejected claims in accordance with the above-identified Federal Regulation.

Narayanan discloses that the amount of the N-vinyl-pyrrolidone copolymer which is attributable to N-vinyl-pyrrolidone is at least 20 weight percent of the copolymer (Narayanan, col. 1, ll. 48-53). Thus, Narayanan discloses or suggests a copolymer with a pyrrolidone content corresponding to the claim 1 requirement therefore. As the Examiner has found (Ans. 4), Narayanan discloses or suggests that the water-insoluble copolymer is ground in preparing the emulsion/dispersion and that the micro-emulsion/dispersion composition thereof can include small size droplets/particles in the size range of about 10-100 millimicrons (0.01-0.1 microns). Narayanan, col. 1, ll. 30-47, col. 2, ll. 15-21, col. 7, ll. 53-58, Table 1. These disclosed or suggested copolymer particle sizes are within the representative claim 1 range of less than 10 microns. Also, the Examiner has correctly found that the micro-emulsion composition of Narayanan is, or would have been understood by one of ordinary skill in the art to encompass, a dispersion of the insoluble copolymers particles, which dispersed particles would not be viewable with the naked eye (Ans. 4 -5; Narayanan, col. 1, ll. 30-47, col. 2, ll. 15-24).

Concerning the representative claim 1 compositional requirement for 0.01 - 30 weight percent of a polymeric anionic emulsifier, Narayanan discloses the dispersion/emulsion composition can include an anionic surfactant, such as sulfonated aliphatic polyester, which is present in the composition in a 2-30 weight percent amount, preferably a 2-8 weight percent amount (Narayanan, col. 3, ll. 4-44). Thus, Narayanan teaches/suggests employing a polymeric anionic surfactant in an amount corresponding to the amount required by representative claim 1 with or

without the additional teachings of Carter, as further relied upon by the Examiner (Ans. 4) in the stated rejection.

In light of the above, we determine that the Examiner has presented, at the least, a strong prima facie case of obviousness as to the subject matter of representative claim 1.

In rebuttal, Appellants contend that the transitional phrase “consisting essentially of” as employed in representative appealed claim 1 excludes N-octyl pyrrolidone, as may be employed by Narayanan, from being included in the representative claim 1 dispersion. In support, Appellants present a Declaration of Dr. Kolazi S. Narayanan, a named co-inventor of the subject Application and the named sole inventor of the applied Narayanan Patent (Br., Evidence Appendix). Dr. Narayanan does not provide any experimental evidence in the Declaration. However, Dr. Narayanan states or opines, *inter alia*,:

3. That N-octyl pyrrolidone was disclosed as essential in my prior patent to maintain the composition as a single phase microemulsion.

4. However, the presence of N-octyl pyrrolidone in the invention composition would change its characteristics materially away from the desired aqueous dispersion, i.e., a two-phase system, where the polymer is suspended in the anionic emulsifier, into a detrimental microemulsion.

5. In this invention, the copolymer particles have a defined size which is necessary for a suitable dispersion of the copolymer. These sizes are much larger than in my prior composition.

Decl. 2.

However, the Examiner has essentially determined that the Declaration does not provide adequate factual underpinnings for the

opinions expressed therein so as to be persuasive in rebutting the strong prima facie case of obviousness presented by establishing that Narayanan requires N-octyl pyrrolidone, an ingredient that would necessarily form a detrimental micro emulsion that is excluded from the representative claim 1 scope (Ans. 5 and 6). We agree.

The “phrase ‘consisting essentially of’ limits the scope of a claim to the specified ingredients and those that do not *materially affect* the *basic* and *novel* characteristic(s) of a composition.” *In re Herz*, 537 F.2d 549, 551-52 (CCPA 1976); *see also* *1PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354 (Fed. Cir. 1998)(“By using the term “consisting essentially of,” the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention”).

During examination, "claims ... are to be given their broadest reasonable interpretation consistent with the specification, and ... claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). In assessing a broadest reasonable claim construction wherein a potentially exclusionary “consisting essentially of” transitional phrase is involved, it is appropriate that Appellants bear the burden of: (1) showing the basic and novel characteristics of their claimed invention, and (2) establishing how those characteristics would be materially changed by any allegedly excluded component of an applied reference. *See In re DeLajarte*, 337 F.2d 870,

873-74 (CCPA 1964); *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (BPAI 1989).

Here, Appellants have not satisfied this burden with the Declaration of Dr. Narayanan.

Dr. Narayanan's Declaration, particularly statement Nos. 3-5, indicates that the Declarant's opinion is that the presence of N-octyl pyrrolidone is essential to the emulsion composition of the applied Narayanan Patent. Dr. Narayanan opines that the inclusion of N-octyl pyrrolidone in the claimed dispersion would detrimentally affect a desired two-phase characteristic thereof. Dr. Narayanan opines that the formation of a detrimental microemulsion would result from the inclusion of N-octyl pyrrolidone in the here claimed composition. In this invention, Dr. Narayanan opines that the copolymer particles are of allegedly larger size than the copolymer particles of the applied Narayanan Patent.

Like the Examiner however, we are not persuaded that Dr. Narayanan has furnished adequate evidence in the Declaration to establish that the inclusion of N-octyl pyrrolidone, in amounts corresponding to the amounts disclosed and required by the applied Narayanan Patent, is excluded by the here employed "consisting essentially of" language. We further agree with the Examiner's criticism of Dr. Narayanan's statement No. 4 in so far as the Examiner has criticized the Declaration evidence as furnishing inadequate support for the expert technical opinion, presented in conclusion form. In this regard, the Declaration is not buttressed by any showing of experimental evidence or other compelling scientific reasoning reasonably establishing that use of N-octyl pyrrolidone in a dispersion together with components (a)

and (b) of representative claim 1 would necessarily form a microemulsion that would materially affect the basic and novel characteristics of the claimed invention.

We note that the applied Narayanan Patent discloses a stable aqueous micro-emulsion containing substantially the same amounts of an anionic surfactant polymer and substantially the same amount of the same type water insoluble copolymer as recited in representative claim 1, albeit Narayanan discloses the additional inclusion of one or more long chain N-alkylpyrrolidones. There is no persuasive evidence or disclosure in the instant Specification or in the Narayanan Patent showing that employing N-octyl pyrrolidone in the type of dispersions Appellants claim here would result in the basic and novel characteristics of the present invention being detrimentally affected thereby. Both the applied Narayanan Patent composition and the present composition are used for substantially the same purpose. Compare Narayanan with the subject Specification (Narayanan, col. 1, ll. 30-40; Specification 1). Moreover, appealed representative claim 1 is not limited to a copolymer particle size that is larger than the copolymer particle sizes employed by the applied Narayanan Patent, as correctly noted by the Examiner (Ans. 4). Thus, the opinions of Dr. Narayanan submitted in the Declaration fall short in establishing that N-octyl pyrrolidone would detrimentally and materially affect the basic and novel characteristics of the here claimed invention.

Moreover, the N-octyl pyrrolidone discussed in the Declaration of Dr. Narayanan is merely one species of the long chain N-alkylpyrrolidones that can be employed in the applied patent dispersion. Thus, the applied prior art

does not specifically require the use of N-octyl pyrrolidone as being essential to the prior art micro-emulsion/dispersion in contravention to the opinion expressed by Dr. Narayanan (Declaration, ¶ 3; Narayanan (U.S. Patent No. 6,303, 131), claim 1). Thus, even if we could have agreed with Appellants concerning the claim construction sought with respect to the exclusion of N-octyl pyrrolidone, such a claim construction would not have been sufficient to overcome the obviousness rejection over Narayanan in that N-octyl pyrrolidone has not been fairly shown to be a required component of the applied Narayanan Patent composition.

For the reasons set forth above and in the Examiner's Answer, Appellants' arguments set forth in the Briefs are not persuasive of any reversible error in the Examiner's rejection.

Having reconsidered the Examiner's rejection in light of the arguments made in the Brief and Reply Brief and the Declaration evidence raised therein, it is our judgment that, on balance, the evidence for obviousness furnished by the Examiner outweighs the evidence proffered by Appellants.

ORDER

The decision of the Examiner to reject claims 1-3 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Narayanan in view of Carter is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

Appeal 2008-1654
Application 10/669,046

AFFIRMED

PL Initial:
sld

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